CLAIMS

1. An active matrix display device comprising an array of display pixels, each pixel comprising:

a current driven light emitting display element (2) and a first drive transistor (22) for driving a current through the display element, the display element and the first drive transistor being in series between power supply lines (26;28);

a first storage capacitor (24) for storing a gate-source voltage of the first drive transistor (22);

a second drive transistor (30) for providing a drive current based on an input voltage provided to the gate of the second drive transistor (30);

a second storage capacitor (32) for storing the input voltage for driving the second drive transistor (30).

2. A device as claimed in claim 1, wherein the drive current provided by the second drive transistor (30) passes through the first drive transistor (22), a voltage thereby being generated on the first storage capacitor (24) corresponding to the drive current.

3. A device as claimed in any preceding claim, wherein each pixel further comprises an address transistor (16) connected between a data input line (6) and an input to the pixel.

4. A device as claimed in any preceding claim, wherein each pixel further comprises a shorting transistor (34) connected across the second storage capacitor (32).

5. A device as claimed in any preceding claim, wherein the first drive transistor (22) is connected between a high power supply line (26) and the anode of the display element (2), and the cathode of the display element is connected to a cathode line (28) which is shared between a row of pixels.

6. A device as claimed in claim 5, wherein a charging transistor (36) is connected between the high power supply line (26) and the gate of the first drive transistor (22).

7. A device as claimed in any one of claims 1 to 4, wherein the anode of the display element (2) is connected to a high power supply line (26) which is shared between a row of pixels, the cathode of the display element (2) is connected to the drain of the first drive transistor (22), and the source of the first drive transistor (22) is connected to ground.

8. A device as claimed in claim 7, wherein the second drive transistor (30) is connected in series with a coupling transistor (40) between a power supply line (27) and the drain of the first drive transistor (22).

9. A device as claimed in claim 8, wherein a charging transistor (36) is connected between ground and the gate of the first drive transistor (22).

10. A device as claimed in any preceding claim, further comprising threshold voltage compensation circuitry for providing threshold compensation of the second drive transistor (30).

11. A device as claimed in claim 10, wherein the compensation circuitry comprises a third storage capacitor (50) for storing the threshold voltage of the second drive transistor (30), wherein the second and third storage capacitors (32, 50) are in series, and wherein the input to the pixel is provided to the junction between the second and third storage capacitors (32, 50).

12. A device as claimed in claim 10 or 11, further comprising transistors (52, 54) to provide a charging path to enable the third storage

capacitor (50) to be charged to a voltage above the threshold voltage of the second drive transistor (30).

13. A device as claimed in any preceding claim, wherein the current driven light emitting display element (2) comprises an electroluminescent display element.

14. A method of addressing an active matrix display device comprising an array of display pixels, in which each pixel comprises a current driven light emitting display element (2) and a first drive transistor (22) for driving a current through the display element, the method comprising, for each pixel:

using an input voltage to drive a second drive transistor (30), thereby generating a source drain current;

passing the source drain current through the first drive transistor (22);

storing the gate-source voltage of the first drive transistor (22) resulting from passing the source drain current through the first drive transistor (22) on a first storage capacitor (24);

driving the display element using the first drive transistor (22) based on the stored gate-source voltage; and

switching off the second drive transistor (30).

15. A method as claimed in claim 14, wherein using an input voltage to drive the second drive transistor (30) comprises adding the input voltage to the threshold voltage of the second drive transistor (22) and applying the result to the gate-source of the second drive transistor.